



**Connecticut
CAREER & TECHNICAL
EDUCATION**

**PERFORMANCE
STANDARDS
&
COMPETENCIES**

2011 Edition

State Department of Education
Bureau of Curriculum and Instruction
Hartford, CT 06106-7049

Introduction

Career and Technical Education: A Definition

The Carl D. Perkins Act of 2006 defines Career and Technical Education as:

Organized educational activities that:

- (A)
 - (i) offer a sequence of courses that provide individuals with coherent and rigorous content aligned with challenging standard relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;
 - (ii) provide technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree;
 - (iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph;
- (B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual.

Career and Technical Education - SKILL PROFICIENCY

- (2) (A) (ii) Student attainment of career and technical skill proficiencies, including student achievement on technical assessments that are aligned with industry-recognized standards, if available and appropriate.

Career and Technical Education Performance Standards and Competencies

The Bureau of Early Childhood, Career and Adult Education is proud to present the 2011 Connecticut Performance Standards and Competencies (PS&C) for career and technical education. As a foundation document for Connecticut in the process of improving the quality of teaching and learning in CTE, these PS&C in each of the 18 areas of concentration, represent nationally aligned standards and competencies.

The growth and development of CTE in our comprehensive secondary schools with its broad variety of elective courses in the seven CTE program areas demonstrate the commitment of teachers and schools to serve the interests and future career interests of students. The 18 areas of concentration represent the most prominent categories of CTE course sequences in Connecticut.

The career and technical PS&C are a guide for the revision of local CTE curricula and the development of new curricula in career and technical education. The PS&C are designed to assist local school districts in the measured improvement of CTE teaching and learning, enhancing academic achievement, and preparing students effectively for the career and technical education statewide assessments.

The Statewide CTE assessment program of the State Department of Education requires that each local high school determine those students who have reached the threshold of being identified as a “concentrator”. A student identified as a concentrator is required to participate in the Connecticut Statewide CTE assessment.

CONCENTRATOR: A Definition

“A student who is enrolled in the final course of a two-credit sequence of courses that specifically addresses the state performance standards and competencies in one of Connecticut’s 18 areas of concentration.”

Agriculture Student Concentrator Definition

A concentrator is defined as, student who is enrolled in a Regional Agricultural Science and Technology Education Center and is a senior who has completed the performance standards and competencies in one of the content area: Animal Science, Plant Science, Agriculture Mechanics, Natural Resources or Aquaculture and successfully meet the performance elements of premier leadership, personal growth, and career success through involvement in the National FFA Organization and a planned Supervised Agricultural Experience (SAE) project.

Career and Technical Education Program Areas and Subject Areas of Concentration

Agricultural Education

- Agriculture Mechanics
- Animal Science
- Aquaculture and Marine-Related Technologies
- Natural Resources and Environmental
- Plant Science

Business and Finance Technology

- Accounting
- Business Management
- Computer Information Systems
- Personal Finance

Cooperative Work Education

- Cooperative Work Education

Family and Consumer Sciences

- Early Childhood Education and Services
- Nutrition, Food Production and Services
- Textiles and Design

Marketing Education

- Marketing Education

Medical Careers Education

- Medical Careers Education

Technology Education

- Automotive Technology
- Computer Aided Drafting and Design
- Pre-Engineering Technology
- Video Production Systems
- Wood Technology

This page is intentionally blank.

Academic Foundation Standards

This page is intentionally blank.

Career and technical education (CTE) provides a context for the development of academic teaching and learning. The commitment of CTE to enhance academic achievement in our schools, programs and courses, has led to the identification of these Academic Foundation Standards. Taken directly from the measurable standards of the Connecticut Academic Performance Test (CAPT), these foundation standards were incorporated into each of the 18 areas of concentration statewide CTE assessments in the spring of 2007.

MATHEMATICS STANDARDS

1) EXTEND THE UNDERSTANDING OF NUMBER TO INCLUDE INTEGERS, RATIONAL NUMBERS AND REAL NUMBERS

- Compare, locate, label and order real numbers on number lines, scales, coordinate grids and measurement tools
- Select and use an appropriate form of number (integer, fraction, decimal, ratio, percent, exponential, scientific notation, irrational) to solve practical problems involving order, magnitude, measures, labels, locations and scales.

2) INTERPRET AND REPRESENT LARGE SETS OF NUMBERS WITH THE AID OF TECHNOLOGIES

- Use technological tools such as spreadsheets, probes, computer algebra systems and graphing utilities to organize and analyze large amounts of numerical information.

3) DEVELOP STRATEGIES FOR COMPUTATION AND ESTIMATION USING PROPERTIES OF NUMBER SYSTEMS TO SOLVE PROBLEMS.

- Select and use appropriate methods for computing to solve problem in a variety of contexts
- Solve problems involving scientific notation and absolute value
- Develop and use a variety of strategies to estimate values of formulas, functions and roots; to recognize the limitations of estimation; and to judge the implications of the results.

4) DEVELOP AND EVALUATE MATHEMATICAL ARGUMENTS USING REASONING AND PROOF

- Recognize the validity of an argument
- Create logical arguments to solve problems and determine geometric relationships

5) CONSTRUCT APPROPRIATE REPRESENTATIONS OF DATA BASED ON THE SIZE AND KIND OF DATA SET AND THE PURPOSE FOR ITS USE.

- Collect, organize, display, compare and analyze large data sets
- Construct a variety of data displays, including box-and-whisker plots, and identify where measures of central tendency and dispersion are found in graphical displays

READING STANDARDS

6) MAKE CONNECTIONS BETWEEN THE TEXT AND OUTSIDE EXPERIENCES AND KNOWLEDGE

- Students recognize and appreciate that contemporary and classical literature has shaped human thought
- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students select and apply strategies to facilitate word recognition and develop vocabulary in order to comprehend text
- Students use appropriate strategies before, during and after reading in order to construct meaning

7) DRAW CONCLUSIONS ABOUT THE AUTHOR'S PURPOSE IN INCLUDING OR OMITTING SPECIFIC DETAILS

- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students select and apply strategies to facilitate word recognition and develop vocabulary in order to comprehend text
- Students use appropriate strategies before, during and after reading in order to construct meaning

8) USE EVIDENCE FROM THE TEXT TO DRAW AND/OR SUPPORT A CONCLUSION

- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students use appropriate strategies before, during and after reading in order to construct meaning

9) USE INFORMATION FROM THE TEXT TO MAKE A PREDICTION BASED ON WHAT IS READ

- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students use appropriate strategies before, during and after reading in order to construct meaning

10) EVALUATE EXPLICIT AND IMPLICIT INFORMATION AND THEMES WITHIN A GIVEN WORK

- Students use appropriate strategies before, during and after reading in order to construct meaning
- Students interpret, analyze and evaluate text in order to extend understanding and appreciation
- Students communicate with others to create interpretations of written, oral and visual texts
- Students recognize how literary devices and conventions engage the reader
- Students explore multiple responses to literature

Agricultural Education

This page is intentionally blank.

Agricultural Education

CONTENT AREA— Agriculture Mechanics

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Agriculture Mechanics: Understand the concepts and skills necessary related to agricultural mechanics technology.

1. Select appropriate tools and materials to construct wood structures related to agriculture.
2. Compare welding (arc, oxyacetylene and M.I.G.) techniques used in agriculture mechanics
3. Explain building and repair of concrete and masonry structures related to agriculture.
4. Use operator/service/technical manuals utilized in agriculture mechanics.
5. Explain the safe operation of agricultural tractors and related agricultural equipment
6. Identify and explain the appropriate use of tools used in agriculture mechanics.
7. Maintain and repair tools used in agriculture mechanics.
8. Operate and maintain agricultural machinery and power systems.
9. Explain wiring of basic agricultural structures.
10. Understand plumbing systems related to agricultural production.
11. Plan, build and maintain agricultural structures.
12. Understand agricultural plans/drawings and measure accurately.

B. Safety with Contaminants and Equipment: Understand the concepts and procedures of handling contaminants, chemicals and related equipment in an agricultural setting.

13. Interpret labels.
14. Read and interpret Material Safety Data Sheets (MSDS).
15. Understand safety precautions used when handling, measuring, mixing, disposing and cleaning of chemicals and related equipment.
16. Explain proper use of safety equipment in agriculture.
17. Understand environmental protection laws and policy.

Agricultural Education

CONTENT AREA— Agriculture Mechanics

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Information-Based Technologies: Understand the use and application of information-based technologies necessary for career success in agriculture.

18. Describe basic computer and software systems as they apply to agriculture.
19. Use career multimedia technology and software as it relates to agriculture.

D. Marketing: Understand the sequence of the channels of distribution and marketing including their impact on the agriculture industry.

20. Understand supply and demand principles in Agriculture, Food, and Natural Resource systems.
21. Identify strategies frequently employed in agricultural marketing programs.
22. Define the concept of profit and loss in agricultural business.
23. Understand the impact of advertising media on agriculture.
24. Explain the impact of positive customer/client relations.

Agricultural Education

CONTENT AREA— Agriculture Mechanics

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Career Exploration and Development: Understand the diversity of careers related to the agricultural industry and strategies to acquire and advance in an agricultural career.

25. Identify the employability skills required for various careers in agriculture.
26. Describe the purpose of a resume and cover letter.
27. Analyze the steps in a job search including preparing the cover letter, resume and application, and participating in the interview process.
28. Identify ways to develop and maintain professional relationships to enhance career success.

F. Personal Growth, Community Leadership, Democratic Principles and Social Responsibility: Understand the concepts, strategies and tools needed which contribute to premier leadership, personal growth and career success through the participation in FFA.

29. Identify and demonstrate appropriate conduct at FFA meetings.
30. Explain effective implementation of parliamentary procedure.
31. Explain effective communication skills.
32. Describe the qualities and characteristics of an effective leader.
33. Identify and apply the various roles and responsibilities of a leader within an organization.

Agricultural Education

CONTENT AREA— Animal Science

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Animal Science: Understand the concepts and skills necessary related to animal science technology.

1. Identify breeds and types of companion, production and/or lab animals.
2. Maintain animal health and sanitation for companion, production and/or lab animals
3. Recognize diseases and ailments of companion, production and/or lab animals.
4. Explain how companion, production and/or lab animals are scientifically classified.
5. Calculate costs and analyses of feed for companion, production and/or lab animals.
6. Identify the products, services and careers within the companion, production and/or lab animal industry.
7. Describe safe handling, shipment and bio-security of companion, production and/or lab animals.
8. Understand the procedures to maintain health and production records for companion, production and/or lab animals.
9. Discuss the principles of companion, production and/or lab animal reproduction, genetics and the application of new and emerging technologies in animal reproduction
10. Explain the implications of animal welfare and animal rights on animal agriculture.
11. Demonstrate knowledge of the principles of comparative anatomy and physiology to uses within companion, production and/or lab animal systems.
12. Identify optimal living conditions for companion, production and/or lab animals.

B. Safety with Contaminants and Equipment: Understand the concepts and procedures of handling contaminants, chemicals and related equipment in an agricultural setting.

13. Interpret labels.
14. Read and interpret Material Safety Data Sheets (MSDS).
15. Understand safety precautions used when handling, measuring, mixing, disposing and cleaning of chemicals and related equipment.
16. Explain proper use of safety equipment in agriculture.
17. Understand environmental protection laws and policy.

Agricultural Education

CONTENT AREA— Animal Science

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Information-Based Technologies: Understand the use and application of information-based technologies necessary for career success in agriculture.

18. Describe basic computer and software systems as they apply to agriculture.
19. Use career multimedia technology and software as it relates to agriculture.

D. Marketing: Understand the sequence of the channels of distribution and marketing including their impact on the agriculture industry.

20. Understand supply and demand principles in Agriculture, Food, and Natural Resource systems.
21. Identify strategies frequently employed in agricultural marketing programs.
22. Define the concept of profit and loss in agricultural business.
23. Understand the impact of advertising media on agriculture.
24. Explain the impact of positive customer/client relations.

E. Career Exploration and Development: Understand the diversity of careers related to the agricultural industry and strategies to acquire and advance in an agricultural career.

25. Identify the employability skills required for various careers in agriculture.
26. Describe the purpose of a resume and cover letter.
27. Analyze the steps in a job search including preparing the cover letter, resume and application, and participating in the interview process.
28. Identify ways to develop and maintain professional relationships to enhance career success.

Agricultural Education

CONTENT AREA— Animal Science

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

- F. Personal Growth, Community Leadership, Democratic Principles and Social Responsibility: Understand the concepts, strategies and tools needed which contribute to premier leadership, personal growth and career success through the participation in FFA.**
29. Identify and demonstrate appropriate conduct at FFA meetings.
 30. Explain effective implementation of parliamentary procedure.
 31. Explain effective communication skills.
 32. Describe the qualities and characteristics of an effective leader.
 33. Identify and apply the various roles and responsibilities of a leader within an organization.

Agricultural Education

CONTENT AREA— Aquaculture

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Aquaculture: Understand the concepts and skills related to aquaculture production and management.

1. Demonstrate knowledge of the design and management of aquaculture systems.
2. Classify fresh water and marine species produced for commercial and recreational purposes.
3. Identify and describe aquaculture intensive and extensive enhancement strategies.
4. Apply sustainable principles and practices to aquaculture production and management.
5. Evaluate the health and productivity of fish and shellfish populations.
6. Apply environmental and ecological concepts to aquaculture production.
7. Identify protocols needed to diagnose, treat and prevent basic aquatic diseases to maintain healthy populations.
8. Identify principles, equipment and procedures related to the production, harvesting and processing of aquaculture products and species.
9. Identify invasive species impacting aquaculture production.
10. Identify morphological features of finfish and shellfish.
11. Understand the lifecycle of aquatic animals.
12. Identify the operating components and principles of filtration and aeration.
13. Explain the basic electrical, plumbing and mechanical components of aquaponic systems.
14. Identify water quality factors affecting aquaculture production.
15. Identify nutrients and nutritional strategies for finfish and shellfish production.
16. Interpret laws related to aquaculture management and production.
17. Understand principles of boating safety and handling.

Agricultural Education

**CONTENT AREA—
Aquaculture and Marine-Related Technologies**

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

B. Safety with Contaminants and Equipment: Understand the concepts and procedures of handling contaminants, chemicals and related equipment in an agricultural setting.

18. Interpret labels.
 19. Read and interpret Material Safety Data Sheets (MSDS).
 20. Understand safety precautions used when handling, measuring, mixing, disposing and cleaning of chemicals and related equipment.
 21. Explain proper use of safety equipment in agriculture.
 22. Understand environmental protection laws and policy.
-

C. Information-Based Technologies: Understand the use and application of information-based technologies necessary for career success in agriculture.

23. Describe basic computer and software systems as they apply to agriculture.
 24. Use career multimedia technology and software as it relates to agriculture.
-

D. Marketing: Understand the sequence of the channels of distribution and marketing including their impact on the agriculture industry.

25. Understand supply and demand principles in Agriculture, Food, and Natural Resource systems.
26. Identify strategies frequently employed in agricultural marketing programs.
27. Define the concept of profit and loss in agricultural business.
28. Understand the impact of advertising media on agriculture.
29. Explain the impact of positive customer/client relations.

Agricultural Education

CONTENT AREA— Aquaculture and Marine-Related Technologies

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Career Exploration and Development: Understand the diversity of careers related to the agricultural industry and strategies to acquire and advance in an agricultural career.

30. Identify the employability skills required for various careers in agriculture.
31. Describe the purpose of a resume and cover letter.
32. Analyze the steps in a job search including preparing the cover letter, resume and application, and participating in the interview process.
33. Identify ways to develop and maintain professional relationships to enhance career success.

F. Personal Growth, Community Leadership, Democratic Principles and Social Responsibility: Understand the concepts, strategies and tools needed which contribute to premier leadership, personal growth and career success through the participation in FFA.

34. Identify and demonstrate appropriate conduct at FFA meetings.
35. Explain effective implementation of parliamentary procedure.
36. Explain effective communication skills.
37. Describe the qualities and characteristics of an effective leader.
38. Identify and apply the various roles and responsibilities of a leader within an organization.

Agricultural Education

CONTENT AREA— Natural Resources and Environmental

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Natural Resources & Environmental Technologies: Understand the concepts and skills necessary related to natural resources and environmental management.

1. Identify tools, materials and equipment for use in natural resources.
2. Understand the procedures for conducting resource, inventories and population studies.
3. Identify native New England tree species and their products.
4. Discuss various methods of disease and pest control in the natural environment.
5. Identify the various types of wildlife and habitats found in New England.
6. Understand drawings, prints, maps and navigational technology used in natural resources.
7. Identify invasive species and their impact on natural resources in the northeast.
8. Identify recreational uses of natural resources.
9. Understand appropriate soil, air and water monitoring and waste management practices.
10. Understand environmental protection laws and policy related to natural resources management and protection.
11. Describe and define the principal functions of a watershed.
12. Understand principles and policies related to sustainable resource management and the impact of development.

B. Safety with Contaminants and Equipment: Understand the concepts and procedures of handling contaminants, chemicals and related equipment in an agricultural setting.

13. Interpret labels.
14. Read and interpret Material Safety Data Sheets (MSDS).
15. Understand safety precautions used when handling, measuring, mixing, disposing and cleaning of chemicals and related equipment.
16. Explain proper use of safety equipment in agriculture.
17. Understand environmental protection laws and policy.

Agricultural Education

CONTENT AREA— Natural Resources and Environmental

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Information-Based Technologies: Understand the use and application of information-based technologies necessary for career success in agriculture.

18. Describe basic computer and software systems as they apply to agriculture.
19. Use career multimedia technology and software as it relates to agriculture.

D. Marketing: Understand the sequence of the channels of distribution and marketing including their impact on the agriculture industry.

20. Understand supply and demand principles in Agriculture, Food, and Natural Resource systems.
21. Identify strategies frequently employed in agricultural marketing programs.
22. Define the concept of profit and loss in agricultural business.
23. Understand the impact of advertising media on agriculture.
24. Explain the impact of positive customer/client relations.

Agricultural Education

CONTENT AREA— Natural Resources and Environmental

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Career Exploration and Development: Understand the diversity of careers related to the agricultural industry and strategies to acquire and advance in an agricultural career.

25. Identify the employability skills required for various careers in agriculture.
26. Describe the purpose of a resume and cover letter.
27. Analyze the steps in a job search including preparing the cover letter, resume and application, and participating in the interview process.
28. Identify ways to develop and maintain professional relationships to enhance career success.

F. Personal Growth, Community Leadership, Democratic Principles and Social Responsibility: Understand the concepts, strategies and tools needed which contribute to premier leadership, personal growth and career success through the participation in FFA.

29. Identify and demonstrate appropriate conduct at FFA meetings.
30. Explain effective implementation of parliamentary procedure.
31. Explain effective communication skills.
32. Describe the qualities and characteristics of an effective leader.
33. Identify and apply the various roles and responsibilities of a leader within an organization.

Agricultural Education

CONTENT AREA— Plant Science

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Plant Science: Understand the concepts and skills necessary related to plant science technology.

1. Apply knowledge of plant anatomy and classification to horticultural plant production.
2. Explain the processes of photosynthesis and plant respiration.
3. Describe the influence of soil (including growing media), water and other environmental factors on horticultural plant growth.
4. Explain plant life cycles, sexual propagation, and the advantages and disadvantages of hybrid plants.
5. Describe optimal conditions for asexual propagation and demonstrate an understanding of techniques used in asexual plant propagation and plant micro-propagation.
6. Develop and implement a plant management plan for greenhouse production including Integrated Pest Management (I.P.M.).
7. Compare methods of production including the social/marketing aspects of organic farming, sustainable agriculture, and genetic engineering in plant science.
8. Demonstrate knowledge of plant maintenance practices for interior plants and landscaping including Integrated Pest Management (I.P.M.).
9. Demonstrate knowledge of greenhouse structures and environmental controls.
10. Apply artistic principles in both floral and landscape design.
11. Identify techniques, tools and technology used in landscape drawing.
12. Demonstrate knowledge of the skills needed in the floral design industry.

B. Safety with Contaminants and Equipment: Understand the concepts and procedures of handling contaminants, chemicals and related equipment in an agricultural setting.

13. Interpret labels.
14. Read and interpret Material Safety Data Sheets (MSDS).
15. Understand safety precautions used when handling, measuring, mixing, disposing and cleaning of chemicals and related equipment.
16. Explain proper use of safety equipment in agriculture.
17. Understand environmental protection laws and policy.

Agricultural Education

CONTENT AREA— Plant Science

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Information-Based Technologies: Understand the use and application of information-based technologies necessary for career success in agriculture.

18. Describe basic computer and software systems as they apply to agriculture.
19. Use career multimedia technology and software as it relates to agriculture.

D. Marketing: Understand the sequence of the channels of distribution and marketing including their impact on the agriculture industry.

20. Understand supply and demand principles in Agriculture, Food, and Natural Resource systems.
21. Identify strategies frequently employed in agricultural marketing programs.
22. Define the concept of profit and loss in agricultural business.
23. Understand the impact of advertising media on agriculture.
24. Explain the impact of positive customer/client relations.

Agricultural Education

CONTENT AREA— Plant Science

Content Measure – Thirty-five percent of twelfth grade students assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Career Exploration and Development: Understand the diversity of careers related to the agricultural industry and strategies to acquire and advance in an agricultural career.

25. Identify the employability skills required for various careers in agriculture.
26. Describe the purpose of a resume and cover letter.
27. Analyze the steps in a job search including preparing the cover letter, resume and application, and participating in the interview process.
28. Identify ways to develop and maintain professional relationships to enhance career success.

F. Personal Growth, Community Leadership, Democratic Principles and Social Responsibility: Understand the concepts, strategies and tools needed which contribute to premier leadership, personal growth and career success through the participation in FFA.

29. Identify and demonstrate appropriate conduct at FFA meetings.
30. Explain effective implementation of parliamentary procedure.
31. Explain effective communication skills.
32. Describe the qualities and characteristics of an effective leader.
33. Identify and apply the various roles and responsibilities of a leader within an organization.

Business and Finance Technology

This page is intentionally blank.

Business and Finance Technology

CONTENT AREA— Accounting

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Accounting Profession: Describe the role that accountants play in business and society.

1. Describe career opportunities in the accounting profession.
2. Explain the need for a code of ethics in accounting and ethical responsibilities required of accountants.

B. Accounting Principles: Identify and describe generally accepted accounting principles currently (GAAP/IFRS), explain how the application of these principles impacts the recording of financial transactions and the preparation of financial statements.

3. Describe and explain the conceptual framework of accounting principles and assumptions.
4. Define assets, liabilities, equity, revenue, expenses, gains and losses.
5. Describe methods for controlling and safeguarding cash.
6. Identify the value of accounts receivable to be reported on the balance sheet and describe the effect on the income statement.
7. Explain the accounting methods used to determine the value of accounts receivable to be reported on the balance sheet and describe the effect on the income statement.
8. Explain transactions affecting accounts receivable, including uncollectible accounts, write-offs, and recoveries.
9. Determine the cost of inventory for merchandising businesses.
10. Determine the costs of property, plant and equipment, natural resources, and intangible assets.
11. Identify, calculate, and record depreciation, depletion, and amortization and explain the impact on the financial statements.
12. Record transactions for accounts payable and other short-term debt.
13. Record and analyze transactions for long-term debt instruments.
14. Describe the criteria used to determine revenue recognition.
15. Describe and record revenue-related transactions.
16. Analyze transactions involving accruals and deferrals.
17. Describe and record expense-related transactions.
18. Describe the criteria used to determine expense recognition.
19. Analyze transactions involving accruals and deferrals.

Business and Finance Technology

CONTENT AREA— Accounting

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Accounting Process: Complete the various steps of the accounting cycle and explain the purpose of each step.

20. Describe the purpose of a uniform accounting system.
21. Describe the purpose of journals and ledgers and their relationship.
22. Describe the impact of technology on the accounting process.
23. Analyze and describe how basic business transactions impact the accounting equation.
24. Apply the double-entry system of accounting to record basic transactions and prepare a trial balance.
25. Explain the need for adjusting entries and record basic adjusting entries.
26. Complete the closing process.
27. Apply the double-entry system of accounting to record complex transactions and prepare a trial balance.
28. Explain the need for adjusting entries and record complex adjusting entries.

D. Financial Reports: Develop an understanding and working knowledge of financial statements.

29. Identify sources of information to prepare basic financial reports.
30. Describe the users and uses of financial information.
31. Describe the information provided in each financial statement and how the statements relate.

E. Special Applications: Apply appropriate accounting principles to payroll.

32. Prepare and maintain payroll records.
33. Calculate and record transactions related to employee payroll.
34. Calculate and record employer's payroll taxes.
35. Calculate and record payroll accruals.
36. Journalize payroll transactions.

F. Financial Analysis: Access the financial condition and operating results of a company and analyze and interpret financial statements and information to make informed business decisions.

37. Calculate component percentages.

Business and Finance Technology

CONTENT AREA— Business Management

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Business Management: Analyze the management functions and their implementation and integration within the business environment.

1. Apply the decision-making process to business applications.
2. Explain reasons for centralizing and decentralizing authority.
3. Discuss characteristics of effective and ineffective leaders.
4. Identify the leadership style most appropriate for a given situation.
5. Identify motivation theories that impact management (Maslow, Herzberg, McClelland).
6. Compare the forms of business ownership.
7. Identify management levels.
8. Discuss the interrelationships of a variety of organizational structure (line, line and staff, functional).
9. Describe effective communication skills.
10. Define business ethics and social responsibility.
11. Explain the importance of ethical standards in conducting business.
12. Identify activities of the human resource unit.
13. Identify legislation affecting the recruitment and selection process (Affirmative Action, Right to Privacy, and American with Disabilities Act).
14. Describe the purpose of employee evaluation.
15. Identify compensation plans, benefit packages, and incentive programs available to employees.
16. Describe legal reasons for terminating employees.
17. Describe the common elements of a labor contract.
18. Explain the role of labor unions and the process of collective bargaining.
19. Discuss the advantages and disadvantages of e-business.
20. Describe how various laws (e.g., Sherman Antitrust Act and Robinson-Patman Act) impact competition.
21. Describe the purpose of financial statements.
22. Explain why high quality and efficiency standards are necessary to compete in the global marketplace.
23. Evaluate and modify a time management plan as appropriate.

Business and Finance Technology

CONTENT AREA— Business Management

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

B. Economics: Assess opportunity costs and trade-offs involved in making choices about how to use scarce and economic resources.

24. Define and give examples of economic wants and how they are satisfied.
25. Define scarcity and why it requires individuals, governments and societies to make choices.
26. Define and give examples of the opportunity cost of personal choices.
27. Describe characteristics of a market system (e.g., profit, competitive markets, and private ownership of property).
28. Identify questions that might be answered by an economic system (e.g., what is to be produced, how it is to be produced, and for whom it is to be produced).
29. Compare and contrast the different types of economic systems.
30. Explain the roles of entrepreneur (e.g., innovator, risk taker) as a driving force in the U.S. economy.
31. Explain how change in one component of circular flow of economic activity affects other components.
32. Describe different kinds of economic institutions in the U.S. economy (e.g., households, businesses, financial institutions, government agencies, labor unions, and nonprofit organizations).
33. Identify the roles of profit and competition in a market-oriented economy.
34. Describe and give examples of markets for goods and services in the U.S. and global economy.
35. Describe how relative prices affect the buying and selling decisions of consumers and producers.
36. Explain the law of demand, law of supply, and equilibrium price.
37. Describe the concept of elasticity and inelasticity.
38. Describe the characteristics of various market structures within an economy (e.g., pure competition, monopoly).
39. Discuss how the competition of buyers and sellers determines relative prices for products in markets as well as profits for sellers.
40. Examine U.S. Laws and government regulation that are designed to impact competition.
41. Describe ways in which money is used in the economy.
42. Explain the role of government taxation and regulation and its impact on business, society, and individuals in an economy.
43. Differentiate between local, state, and federal tax receipts and expenditures.
44. Identify monetary and fiscal policies used by the Federal Reserve System to regulate the economy.

Business and Finance Technology

CONTENT AREA— Business Management

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Entrepreneurship: Recognize the characteristics of an entrepreneur; determine opportunities and problem recognition and pursuit.

45. Identify the characteristics of a successful entrepreneur.
46. Describe an entrepreneurial opportunity and formulate the steps in establishing a business oriented toward that opportunity.
47. Identify target markets for potential new businesses.
48. Identify elements of marketing (e.g., product, place, price and promotion).
49. Describe how the Internet and other emerging technologies have impacted the components of marketing including product, place, price and promotion.
50. Project the total cash needed to start a business (e.g., start-up costs, ongoing operational expenses, and cash reserves).
51. Identify the major sources of funding for a business (e.g., venture capitalists, grants).
52. Establish goals and objectives for a planned business.
53. Describe the components of a thorough business plan.
54. Identify the key components of an organizational structure of a planned business.
55. Identify and evaluate the various ways in which government (federal, state, and local) regulations affect specific businesses.
56. Compare and contrast the advantages and disadvantages of the various forms of business ownership.
57. Identify strategies that facilitate ethical behavior in a small business.

Business and Finance Technology

CONTENT AREA— Business Management

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. International Business: Describe the interrelatedness of social, cultural, political, legal, and economic factors that shape and impact the global business environment.

58. Identify distinctive social and cultural factors that affect business activities (e.g., time, workday, workweek, schedules and holidays).
59. Identify cultural differences in dress, gestures and social behaviors throughout the world.
60. Identify and differentiate between types of governments.
61. Compare the business protocols of various countries.
62. Describe how trade barriers and incentives affect choice of location for companies operating internationally.
63. Analyze the impact of political environments on international business.
64. List the steps in the importing and exporting process.
65. Discuss why governments impose trade barriers (e.g., quotas, tariffs, licensing requirements, and exchange rate controls) and offer trade incentives.
66. Identify factors and terms that influence the applications of managerial styles in different countries (e.g., host country, home country, expatriate, host country, national and third country).
67. Illustrate how social, cultural, technological, geographic, and political factors influence consumer buying behavior and business activities in different cultures.
68. Identify how international business activities affect the balance of trade.
69. Define basic terms such as currency, currency exchange, and barter and explain how currency exchange rates affect business transactions.
70. Describe how the international business environment affects currency value and prices charged in international markets.
71. Describe the international monetary system including the International Monetary Fund and the World Bank.

Business and Finance Technology

CONTENT AREA— Business Management

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

- E. Business Law: Analyze the relationship between ethics and the law and describe the sources of the law, the court system structure, and classifications of procedural and substantive law.**
72. Describe the difference between a legal and ethical responsibility.
 73. Identify sources of law (e.g., Constitutions, Statutory Law, Administrative Regulations, Court Decisions, and Precedent).
 74. Describe the basic structure of the national and state court systems.
 75. Define the statute of limitations.
 76. Distinguish between a felony and a misdemeanor.
 77. Distinguish between a tort and a crime.
 78. Determine several defenses to criminal acts (e.g., insanity defense, self defense).
 79. Explain how offer and acceptance can create contractual rights and duties.
 80. Define and distinguish between different types of consideration and list the expectation to the requirements of consideration.
 81. Describe a minor's rights to avoid a contract.
 82. Identify categories of people who lack contractual capacity.
 83. Describe the essential information that should be included in writing under the statute of frauds.
 84. Identify ways in which a contract can be discharged.
 85. Describe the breach of contract and the remedies available when a contract is breached.
 86. Describe consumer protection legislation (e.g., Federal Trade Commission Act, Consumer Product Safety Act, and Consumer Leasing Act).
 87. Explain the doctrine of employment-at-will.
 88. Identify legislation that regulates employee rights (e.g., Americans with Disabilities Act, Age Discrimination in Employment Act, Family and Medical Leave Act, etc.).
 89. Identify legislation that regulates employment conditions (e.g., Fair Labor Standards Act, Occupational Safety and Health Act, etc).
 90. Distinguish among liens, licenses and easements.
 91. Identify and describe various types of intellectual property (e.g., trademark, trade name, trade dress, copyright, patent, and trade secret).
 92. Explain copyright law, including the procedure for obtaining a copyright, copyright infringement and the fair use doctrine.
 93. Identify the issues and concerns that might be included in a prenuptial agreement.
 94. Distinguish between common law and a ceremonial marriage.
 95. Outline the law of domestic relations as it relates to spousal and child support.

Business and Finance Technology

CONTENT AREA— Business Management

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Business Law: Analyze the relationship between ethics and the law and describe the sources of the law, the court system structure, and classifications of procedural and substantive law.

96. Explain the process for modifying or revoking a will.
97. Distinguish between the protections given to spouses and to children under the law of wills.

Business and Finance Technology

CONTENT AREA— Computer Information Systems

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Impact on Society: Assess the impact of information technology in a global society.

1. Describe the impact of technology on the knowledge and skills needed for success in the workplace.

B. Hardware: Identify hardware components appropriate for specific tasks

2. Identify the purpose and care of all types of computers and components.
3. Provide examples of emerging hardware technologies.

C. Operating Systems and Utilities: Describe various types of operating systems and utilities.

4. Describe the process for managing folders and files.
5. Identify and use appropriate help resources (e.g., help desks, online help manuals) to install, configure, upgrade, diagnose, and repair operating systems and utilities.

D. Input Technologies: Use various input technologies to enter and manipulate information appropriately.

6. Develop proper input techniques (e.g., 10-key touch pad, scanning, digital cameras, and recognition of developing technologies, the use of a touch screen mouse or stylus, speech recognition, student response systems, digital inking, and any new emerging technology)
7. Use a variety of input technologies to maximize productivity.

Business and Finance Technology

CONTENT AREA— Computer Information Systems

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Productivity Software: Identify, evaluate, select, install, use, upgrade, and customize productivity software to diagnose and solve software problems.

8. Create and present multi-media using word processing and presentation software.
9. Use word processing, desktop publishing, database, spreadsheet, presentation, and multimedia software to improve academic achievement across the curriculum.
10. Design, create, and publish pages incorporating multi-media using various online template resources.
11. Create and utilize multimedia delivery tools (e.g., blogs, podcasting, webcasting).
12. Design, develop, and deliver advanced web content and applications using web design programs.

F. Programming and Application Development: Demonstrate the ability to code.

13. Identify and explain programming structures.
14. Apply design principles to programming tasks.

G. Networking, Infrastructure, and Security: Develop skills to design, deploy, and administer networking and security procedures for IT.

15. Identify network devices, including connectivity hardware, and describe their functions.
16. Distinguish among network environments (e.g., peer-to-peer, client server, thin client, n-tier, Internetworks, intranets, extranets).
17. Describe procedures used to recover information from failures and security breaches.
18. Describe controls used to prevent loss of integrity of data and other information resources.

Business and Finance Technology

CONTENT AREA— Personal Finance

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Personal Decision Making: Use a rational decision-making process as it applies to the roles of citizens, workers, and consumers.

1. Define and give examples of economic wants and needs.
2. Apply the steps in a rational decision-making process to a situation involving an economic decision by an individual.
3. Analyze the effects of ethics on business and financial management decisions.

B. Earning and Reporting Income: Identify various forms of income and analyze factors that affect income as a part of the career decision-making process.

4. Calculate net pay.
5. Explain the effect on take-home pay of changing the allowances claimed on an “Employees’ Withholding Allowance Certificate” (IRS Form W-4).

C. Managing Finances and Budgeting: Develop and evaluate a budget plan.

6. Construct and use a personal budget plan and evaluate it according to short- and long-term goals.
7. Define fixed and variable expenses.
8. Categorize and classify expenses as fixed or variable.
9. Determine discretionary income in a budget plan.

Business and Finance Technology

CONTENT AREA— Personal Finance

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. Saving and Investing: Evaluate savings and investment options to meet short- and long-term goals.

10. Describe why and how people save.
11. Identify the opportunity costs of saving.
12. Differentiate between saving and investing.
13. Distinguish between simple and compound interest.
14. Explain reasons for changes in a savings and investing plan as one proceeds through the life cycle.
15. Describe how the stock market functions.
16. Identify the risk/return trade-offs for saving and investing.
17. Analyze the power of compounding and the importance of starting early in implementing a plan of saving and investing.
18. Examine the fundamental workings of the Social Security System and the system's effects on retirement planning.

E. Buying Goods and Services: Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

19. Apply a rational decision-making process to personal buying decisions.
20. Distinguish between goods and services.
21. Apply comparison shopping practices and return policies.
22. Identify alternative sources for purchases (e.g., online, retail stores, catalogs).
23. Describe reliable consumer resources that are available to collect information for making buying decisions about durable and nondurable goods.
24. Analyze and evaluate advertising claims.
25. Investigate current types of consumer fraud, including online scams.
26. Compare the costs and benefits of purchasing, leasing, and renting.
27. Calculate the costs of utilities, services, maintenance, and other expenses involved in independent living.
28. Explain how a consumer can identify and report fraudulent behavior and practices observed on the Internet.

Business and Finance Technology

CONTENT AREA— Personal Finance

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

F. Banking and Financial Institutions: Evaluate services provided by financial deposit institutions to transfer funds.

29. Identify various types of financial institutions.
30. Describe the basic services provided by financial institutions.
31. Identify the rights and responsibilities associated with using a checking account.
32. Describe the steps involved in opening and using a checking account.
33. Compare and contrast the different types of checking accounts offered by various financial institutions.
34. Differentiate among types of electronic monetary transactions (e.g., debit cards, ATM, and automatic deposits/payments) offered by various financial institutions.
35. Identify other means of transferring funds (e.g., money orders and certified checks).
36. Describe and use the steps involved in the bank reconciliation process.
37. Compare and contrast the various forms of endorsement.
38. Compare costs and benefits of online and traditional banking.
39. Analyze privacy and security issues associated with financial transactions.
40. Identify the functions of the Federal Reserve System.

G. Using credit: Analyze factors that affect the choice of credit, the cost of credit, and the legal aspects of using credit.

41. Describe the process of borrowing to purchase of goods and services.
42. Describe the risks and responsibilities associated with using credit.
43. Identify the opportunity cost of credit decisions.
44. Identify methods of establishing and maintaining a good credit rating.
45. Determine the advantages and disadvantages of using credit.
46. Describe the various methods of financing a purchase.
47. Describe interest as a cost of credit and explain why it is charged.
48. Describe the importance of a sound credit rating.
49. Analyze credit card features and their impact on personal financial planning.
50. Explain why an interest rate varies with the amount assumed risk.
51. Explain credit ratings and reports and describe why they are important to consumers.
52. Describe examples of the benefits of financial responsibility and the costs of financial irresponsibility.
53. Identify strategies for effective debt management.

Business and Finance Technology

CONTENT AREA— Personal Finance

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

G. Using credit: Analyze factors that affect the choice of credit, the cost of credit, and the legal aspects of using credit.

54. Describe the process of borrowing to purchase of goods and services.
55. Identify the components listed on a credit report and explain how that information is used and is received by and reported from the credit reporting agencies.
56. Identify specific steps that consumers can take to minimize their exposure to identity theft.
57. Describe problems that occur when an individual is the victim of identity theft.
58. Identify specific steps that should be taken by a victim of identity theft.
59. Identify ways that thieves can fraudulently obtain personal information.
60. Explain the implications of bankruptcy.
61. Compare and contrast the various aspects of credit cards (e.g., APR, grace period, incentive buying, methods of calculating interest, and fees).

H. Protecting Against Risk: Analyze choices available to consumers for protection against risk and financial loss.

62. Identify risk in life and how to gain protection against the consequences of risk.
63. Evaluate insurance as a risk management strategy.
64. Identify the type of insurance associated with different types of risk (e.g., automobile, personal and professional liability, home and apartment, health, life, long term care, and disability).
65. Explain the role of insurance in financial planning.
66. Determine recommendations for insurance coverage for individuals/families at different income levels and varying risks.

Cooperative Work Education

This page is intentionally blank.

Cooperative Work Education

CONTENT AREA— Cooperative Work Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Career Readiness: Assess and identify character traits, career interests and aptitudes in developing a career plan relative to labor trends of the global economy.

1. Explain the importance of life-long learning.
2. Evaluate/research occupational interests.
3. Describe attitudes and ethics important to career success.
4. Determine personal strengths, talents, values and interests to appropriate jobs and careers to maximize career potential.
5. Identify the various research tools available in the career exploration process (e.g., computer-assisted programs, newspapers, books, industry tours, job shadows, career fairs and the Internet).
6. Evaluate postsecondary training opportunities related to career interests, including certification, licensing, apprenticeships, college, military options and employer-sponsored training sessions.
7. Identify career interests and transferable skills necessary for opportunities in the global workforce.
8. Describe the components of and develop an individual career plan and portfolio.
9. Analyze needs of business and industry as they relate to labor and economic trends.
10. Describe the changing roles in the workplace including non-traditional occupations in the workplace.

B. Career Acquisition: Identify skills, aptitudes and ethics required for employment acquisition in a competitive global marketplace.

11. Describe and participate in various work-based learning opportunities (e.g., mentoring, cooperative work, job shadows, apprenticeships and internships.)
12. Describe the elements of effective oral and written communication skills necessary for employment.
13. Identify the resources available as well as the skills needed to conduct a job search.
14. Identify the components of the decision-making process and how they relate to the various stages of the work life cycle.
15. Describe and demonstrate employability skills including job search, job selection, interviewing, and presentation.
16. Compare and contrast wage benefit packages.

Cooperative Work Education

CONTENT AREA— Cooperative Work Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Career Retention: Demonstrate mastery of the entry level employment skills, competencies and character education essential for success in the workplace including issues of diversity, expectations, trends and labor regulations.

17. Describe and demonstrate positive personal qualities and self-management skills (e.g., time management, organization, punctuality and attendance).
18. Describe how productivity, work ethic and quality affect job stability.
19. Describe and demonstrate effective communication team-building and leadership skills.
20. Describe and demonstrate personal health and workplace safety procedures.
21. Identify biases, harassment and discriminatory behaviors impacting job success and advancement.
22. Describe the importance of seeking out new challenges and opportunities for advancement and transition.
23. Identify the appropriate methods for responding to constructive criticism and employment evaluation.
24. Describe the importance of following company policy and procedures and the legal ramifications of labor laws impacting employment.
25. Describe and apply conflict resolution skills.
26. Explain and apply problem solving and critical thinking skills.

D. Integrated Learning and Life Skills: Demonstrate how academic knowledge and skills are applied to the workplace, personal life and life-long learning.

27. Describe the importance of integrating and applying academic and occupational skills in school, work and personal lives.
28. Use communication, mathematical and technical skills to compare, compute, and analyze complex information.
29. Describe how personal choices, experiences, technology, education/training and other factors correlate with earning a living.
30. Identify ways in which income from employment is affected by factors such as supply and demand, geographic location, level of education, type of industry, union membership, productivity skill level and work ethic.
31. Compare and contrast strategies for personal finance and risk management.
32. Demonstrate the ability to set, monitor and achieve clearly defined goals.

Cooperative Work Education

CONTENT AREA— Cooperative Work Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Technology and Information: Demonstrate technological knowledge and skills required for future careers.

33. Describe how technology is used to identify and solve problems.
34. Identify and evaluate how information technology developments have changed methods in which people work.
35. Identify, select, apply and troubleshoot software as it applies to a variety of work applications.
36. Describe how new developments in varied fields or technology affect the job market and the responsibility levels of employees.
37. Analyze the ethical issues surrounding access, privacy and confidentiality of information in emerging technologies.

F. Economics: Understand economic concepts that influence personal, business and government decisions.

38. Describe how goals, resources and structures are used within an organization.
39. Describe the concepts of entrepreneurship.
40. Compare and contrast the advantages and disadvantages of the various forms of business ownership.
41. Explain economic principles affecting business cycles and the workforce.
42. Identify and analyze possible solutions to specific business problems.
43. Describe how economic decisions can be implemented as they relate to personal financial affairs, the successful operation of organizations and within a global economy.
44. Describe the various roles within the market system (e.g., consumer, producer, saver and investor).

This page is intentionally blank.

Family and Consumer Sciences

This page is intentionally blank.

Family and Consumer Sciences

CONTENT AREA— Early Childhood Education and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Family and Consumer Sciences Skills: Develop a common core of skills related to Family and Consumer Sciences Education.

1. Describe the available resources for managing individual and family resources related to child development, parenting education, and early childhood education and services.
2. Describe the impact of technology on individual and family resources as related to child development, parenting education, and early childhood education and services.
3. Identify factors that impact consumer advocacy related to child development, parenting education, and early childhood education and services.
4. Identify and demonstrate communication skills that contribute to positive relationships.
5. Describe the roles of teamwork and leadership skills in the family, workplace, and community.

B. Principles of Human Growth & Development: Analyze principles of human growth and development during childhood.

6. Explain physical, emotional, social, and intellectual development.
7. Describe interrelationships among physical, emotional, social, and intellectual aspects of human growth and development during childhood.

Family and Consumer Sciences

CONTENT AREA— Early Childhood Education and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

C. Factors Affecting Human Growth & Development: Analyze conditions that influence human growth and development during childhood.

8. Describe the impact of heredity and environment on human growth and development during childhood.
9. Explain how society's changing economic conditions influence parenting practices of caregivers and family members.
10. Describe the effects of gender, ethnicity, and culture on individual development during childhood.
11. Describe the effects of life events during childhood on an individual's physical and emotional development.

D. Strategies for Promoting Growth & Development: Analyze strengths that promote growth and development during childhood.

12. Explain the role of nurturance on the growth and development of children.
13. Explain the role of communication on the growth and development of children.
14. Explain the role of support systems in meeting the growth and development needs of children.

E. Roles and Responsibilities of Parenting: Analyze the roles and responsibilities of parenting.

15. Examine parenting roles across the life span.
16. Describe expectations and responsibilities of the family unit.
17. Explain potential consequences of parenting practices for the individual, family, and society.
18. Identify various societal conditions that impact parenting across the life span.
19. Compare and contrast cultural differences in roles and responsibilities of parenting.

Family and Consumer Sciences

CONTENT AREA— Early Childhood Education and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

F. Parenting Practices: Evaluate parenting practices that maximize human growth and development.

20. Describe communication strategies that promote positive self-esteem in children.
21. Analyze common practices and emerging research about discipline on human growth and development.
22. Determine the possible impacts of abuse and neglect on children and families and describe methods for prevention.
23. Determine criteria for selecting care and services for children.

G. External Support Systems: Evaluate external support systems that provide services for parents.

24. Describe community resources that provide opportunities related to parent education.
25. Identify the benefits of individual and family participation in community activities.

H. Pre-Parenting Factors: Analyze physical and emotional factors related to beginning the parenting process.

26. Identify biological processes related to prenatal development, birth, and health of child, mother and father.
27. Describe biological and environmental factors that affect the health of the child and parents.
28. Explain the emotional factors of prenatal development and birth in relation to the health of the parents and child.
29. Identify alternatives to biological parenthood.
30. Describe legal and ethical technological advances from conception to birth.

Family and Consumer Sciences

CONTENT AREA— Early Childhood Education and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

I. Career Paths: Analyze career paths within early childhood, education and childcare services and related fields.

31. Identify personality traits of an individual well suited to careers working in early childhood.
32. Determine the roles and functions of individuals engaged in early childhood, education, child-care services and related fields.
33. Identify education and training requirements and opportunities for career paths in early childhood, education, child-care services and related fields.
34. Describe the economic impacts of early childhood, education, child-care services occupations and related fields.
35. Describe and demonstrate effective employability skills.

J. Developmentally Appropriate Practices: Analyze developmentally appropriate practices to plan for early childhood, education and childcare services.

36. Explain child development theories and their implications for educational and childcare practices.
37. Determine a variety of assessment methods to observe and interpret children's growth and development.
38. Identify various cultural and environmental influences when assessing children's development.
39. Identify the major exceptionalities in IDEA and how they affect the classroom environment.

K. Integration of Curriculum: Demonstrate integration of curriculum and instruction to meet children's developmental needs and interests.

40. Identify a variety of curriculum and instructional models.
41. Plan learning activities in all curriculum areas that meet the developmental needs and learning styles of children.
42. Identify and develop a variety of teaching methods to meet individual needs of children.
43. Determine and demonstrate methods to establish activities, routines, and transitions.

Family and Consumer Sciences

CONTENT AREA— Early Childhood Education and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

L. Safe & Healthy Learning Environment: Plan a safe and healthy learning environment for children.

44. Describe methods to manage physical space to maintain a safe and healthy learning environment.
45. Describe and implement strategies to teach children health, safety, and sanitation habits.
46. Identify methods for planning for the nutritional needs of children.
47. Describe the process for recognizing and reporting suspected child abuse and neglect.
48. Identify basic health practices and disease prevention procedures for workers and children regarding childhood illness and communicable diseases.
49. Identify and plan security and emergency procedures.

M. Positive Collaborative Relationships: Demonstrate techniques for positive collaborative relationships with children.

50. Establish developmentally appropriate guidelines for behavior.
51. Describe problem-solving methods and skills used with children.
52. Identify interpersonal skills that promote positive and productive relationships with children [and families].
53. Determine methods for communicating information to parents.

Family and Consumer Sciences

CONTENT AREA— Nutrition, Food Production and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Family and Consumer Sciences Skills: Develop a common core of skills related to Family and Consumer Sciences Education.

1. Describe employability skills used in the community and workplace settings.
2. Describe the relationship of the environment to food production, nutrition and hospitality.
3. Identify the impacts of technology on individual and family resources as related to food production, nutrition and hospitality.
4. Analyze ways in which individuals and families manage resources to meet goals relating to food production, nutrition and hospitality.

B. Nutrition and Wellness Practices: Analyze factors that influence nutrition and wellness practices across the lifespan.

5. Compare the impact of psychological, cultural, and social influences on food choices and other nutrition practices.
6. Describe the impact of global and local events and conditions on food choices and practices.

C. Nutritional Needs: Evaluate the nutritional needs of individuals and families in relation to health and wellness across the life span.

7. Describe the effect of nutrients on health, appearance, and peak performance.
8. Explain the relationship of nutrition and wellness to individual and family health throughout the life span addressing the diversity of people, culture, and religions.
9. Describe the impact of food and diet fads, food addictions, and eating disorders on wellness.
10. Evaluate sources of food and nutrition information, including food labels, related to health and wellness.

Family and Consumer Sciences

CONTENT AREA— Nutrition, Food Production and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. Acquisition, Handling & Use of Foods: Demonstrate ability to acquire, handle and use foods to meet nutrition and wellness needs of individuals and families across the life span.

11. Demonstrate ability to select, store, prepare, and serve nutritious foods.
12. Describe principles to maximize nutrient retention in prepared foods.
13. Utilize dietary guidelines to select foods to promote a healthy life style.

E. Food Safety: Evaluate factors that affect food safety, from production through consumption.

14. Determine conditions and practices that promote safe food handling and inspection.
15. Identify safety and sanitation practices throughout the food chain.
16. Describe food borne illness as a health issue for individuals and families.

F. Career Paths: Analyze career paths within the hospitality, food production and services, food science, dietetics and nutrition industries.

17. Determine the roles and functions of individuals engaged in hospitality, food production and services.
18. Identify opportunities for employment and entrepreneurial endeavors.

G. Safety, Security & Environmental Issues: Demonstrate procedures applied to safety, security and environmental issues.

19. Determine methods and demonstrate the ability to ensure safety at all times.
20. Examine utilization and conservation of resources.

H. Service: Apply concepts of service to meet customer expectations.

21. Describe and practice various service methods.
22. Determine the relationship between an employee's actions and customer satisfaction.
23. Describe and implement strategies for resolving complaints.

Family and Consumer Sciences

CONTENT AREA— Nutrition, Food Production and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

I. Food Safety & Sanitation: Demonstrate food safety and sanitation procedures.

24. Describe and practice good personal hygiene/health procedures, and report symptoms of illness.
25. Explain and demonstrate methods for properly receiving and storing both raw and prepared foods.
26. Explain and demonstrate techniques for food handling and preparation that prevent cross contamination between raw, cooked and ready-to-eat foods and between animal or fish sources and other food products.
27. Examine current types and proper uses of cleaning materials and sanitizers.
28. Describe and demonstrate various types of waste disposal and recycling methods.

J. Food Production Equipment: Demonstrate selecting, using and maintaining food production equipment.

29. Describe and demonstrate techniques for operating tools and equipment following safety procedures.
30. Describe and demonstrate the process for maintaining tools and equipment following safety procedures.
31. Describe and demonstrate the proper procedures for storing equipment and tools.

K. Planning Menu Items: Demonstrate planning menu items based on standardized recipes to meet customer needs.

32. Describe and apply menu-planning principles to develop and modify menus.
33. Monitor recipe/formula proportions and modifications for food.

Family and Consumer Sciences

CONTENT AREA— Nutrition, Food Production and Services

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

L. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.

34. Describe and demonstrate the appropriate skills used in knife, tool, and equipment handling.
35. Describe and demonstrate a variety of cooking methods (e.g., roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, wokking, convection, micro waving, and other emerging technologies).
36. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
37. Describe and demonstrate the process for preparing various meats, seafood, and poultry.
38. Describe and demonstrate the process for preparing various stocks, soups, and sauces.
39. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
40. Describe and demonstrate the process for preparing various salads, dressings, marinades, and seasonings.
41. Describe and demonstrate the process for preparing sandwiches, canapés, and appetizers.
42. Describe and demonstrate the process for preparing baked goods and desserts.
43. Describe and demonstrate the process for preparing breakfast meats, eggs, cereals, and batter products.
44. Describe and demonstrate techniques for food presentation.
45. Describe the purpose and various uses of convenience food items.

Family and Consumer Sciences

CONTENT AREA— Textiles and Design

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Family and Consumer Sciences Skills: Develop a common core of skills related to areas of Family and Consumer Sciences Education.

1. Identify policies that support consumer rights and responsibilities as related to textiles and apparel.
2. Describe the impact of technology on individual and family resources as related to textiles and apparel.
3. Describe interrelationships between the economic system and consumer actions as related to textiles and apparel.
4. Demonstrate the management of financial resources and analyze how individuals and families manage resources to meet goals relating to textiles and apparel.

B. Fibers and Textiles: Evaluate fiber and textile materials.

5. Select appropriate terminology for identifying, comparing, and analyzing the most common generic textiles fibers.
6. Identify general performance characteristics of fiber and textiles.
7. Describe and assess effects of textiles characteristics on design, construction, care, use, and maintenance of products.
8. Select appropriate procedures for care of textiles products.

C. Apparel and Textile Design: Demonstrate apparel and textiles design skills.

9. Describe the ways in which fabric, texture, and pattern can affect visual appearance.
10. Apply basic and complex color schemes and color theory to develop and enhance visual effects.
11. Explain the appropriate usage of elements and principles of design in designing, constructing, and/or altering textiles products.
12. Apply elements and principles of design to assist consumers in making decisions.

Family and Consumer Sciences

CONTENT AREA— Textiles and Design

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. Textile and Apparel Products: Demonstrate skills needed to produce, alter or repair textile and apparel products.

13. Explain the purpose of and use a variety of equipment, tools, and supplies for apparel and textiles construction, alteration, and repair.
14. Describe and demonstrate basic skills for producing and altering textiles products and apparel.
15. Explain commercial pattern instructions including pattern markings and symbols.
16. Describe and demonstrate techniques for the proper lay-out of commercial patterns.

E. Career Paths: Analyze career paths within textile and apparel industries.

17. Identify education and training requirements and opportunities for career paths in textiles and apparel.
18. Describe employability skills used in the community and workplace settings.

This page is intentionally blank.

Marketing Education

This page is intentionally blank.

Marketing Education

CONTENT AREA— Marketing Education

Content Measure – Thirty-five percent of all concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Marketing-Information Management: Understand the concepts, systems, and tools needed to gather, access, synthesize, evaluate, and disseminate information for use in making business decisions.

1. Describe components of information management.
2. Explain the process for assessing information needs and storing information for future use.
3. Evaluate quality and source of information.
4. Identify ways in which technology impacts business.
5. Explain the role of information systems.
6. Describe and demonstrate common e-mail functions.

B. Channel Management: Understand the concepts and processes needed to identify, select, monitor, and evaluate sales channels.

7. Define channel management.
8. Explain the relationship between customer service and channel management.
9. Describe channels of distribution.
10. Describe the use of technology in the channel management function.
11. Describe ethical considerations in channel management.
12. Describe the regulation of marketing-information management.
13. Describe the nature and scope of consumer behavior.
14. Explain components of consumer decision-making models.
15. Describe consumer life cycles.
16. Explain the impact of globalization on domestic consumer behavior.

C. Market Planning: Understand concepts and strategies utilized to determine and target marketing strategies to a select audience.

17. Explain the concept of market and market identification.
18. Explain the concept of marketing strategies.
19. Describe the purpose and components of marketing plans.
20. Define and describe the purpose of sales forecasts.
21. Describe the nature of target marketing in marketing communications.
22. Describe the role of consumer behavior in strategic marketing planning.
23. Explain the relationship between market segmentation and consumer behavior.
24. Define a target market and the factors impacting target market selection.
25. Explain the SWOT analysis strategic planning method for marketing.

Marketing Education

CONTENT AREA— Marketing Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. Pricing: Understand the concepts and strategies utilized in determining and adjusting prices to maximize return and meet customer’s perceptions of value.

26. Explain the pricing function.
27. Describe the role of business ethics in pricing.
28. Explain the use of technology in the pricing function.
29. Explain factors affecting pricing decisions.

E. Product/Service Management: Understand the concepts and processes needed to obtain, develop, maintain, and improve a product or service mix in response to market opportunities.

30. Determine initial feasibility of product idea.
31. Describe process for adjusting ideas to create a functional product.
32. Describe the importance of product life cycle.
33. Explain the processes used for ongoing opportunity recognition.
34. Describe factors used by marketers to position products/services.
35. Explain the nature of product/service branding.

F. Promotion: Understand the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome.

36. Explain direct marketing channels.
37. Identify and define media types.
38. Describe and compare communications channels used in sales promotion and public-relations activities.
39. Identify types of public-relations activities.
40. Describe word-of-mouth channels used to communicate with targeted audiences.
41. Explain characteristics of online advertisements.
42. Describe mobile advertising strategies.
43. Explain the process for determining advertising reach of media.

Medical Careers Education

This page is intentionally blank.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Health Science: Understand and apply the academic subject matter required for entrance within health science.

1. Differentiate among and complete various patient forms used in documenting client/patient information.
2. Perform mathematical operations to convert metric measures in fluid balance and to convert weight to metric measurement.
3. Define and use medical terminology including root words, prefixes, suffixes and abbreviations.
4. Describe the principles of biology and anatomy used in assessing health.
5. Describe the history of health care in respect to time, culture, religion, and regions.

B. Disease Processes: Demonstrate the concepts of basic disease processes.

6. Compare and contrast the types of healing including factors which promote or delay the response.
7. Differentiate between normal and abnormal immune responses.
8. Compare the results of a compromised immunological system including acquired immune deficiency syndrome (AIDS), hypersensitivity reactions, and transplant rejections.
9. Interpret principles of infection including diagnostic tests, signs and symptoms, and treatment.
10. Define the pathogenesis of neoplasm including diagnostic measures, treatment, and risk factors.

C. Normal Functions of the Body: Illustrate the effects of abnormal factors such as immobility, stress, pain, substance abuse and environmental hazards on the normal functioning of the body.

11. Explain the effects of immobility on the body systems.
12. Interpret the potential effects of stress on the development of disease.
13. Describe the theory of pain and measures of pain control.
14. Describe signs of substance abuse including predisposing factors.
15. Describe potential complications of substance abuse.
16. Compare various diseases caused by environmental hazards including temperature-related disorders, bites, stings and food poisoning.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. Growth and Development: Differentiate and illustrate the health problems associated with the stages of growth and development.

17. Describe various health problems associated with adolescence to include musculoskeletal disorders, eating disorders, skin disorders and infectious mononucleosis.
18. Interpret significant physiologic changes with aging relative to specific body systems.

E. Body Systems: Compare the anatomical structures and physiological function of each body system.

19. Diagram the structure of cells, tissues, organs and systems.
20. Compare normal and abnormal structures of cell and tissues.
21. Compare normal and abnormal functions of body systems
22. Define and use medical terminology related to each body system, including root words, prefixes, suffixes and abbreviations.

F. Communication Skills: Explain the various methods of giving and obtaining information; communicate effectively, both orally and in writing.

23. Describe the importance of effective communication using rules of communication and appropriate listening skills.
24. Explain the importance and demonstrate the ability to adapt communication to individual needs (age and development specific) and multicultural and multilingual needs.
25. Describe and demonstrate proper etiquette and facility specific guidelines for handling situations including proper problem calls, emergency calls, and sending and receiving information.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

G. Health Care Environment: Understand how the health care workers' role fits into their department, organization, and overall health care environment; demonstrate how key systems affect services performed and quality of care given.

26. Differentiate among the range of services offered to clients through various health care facilities.
27. Compare ways various state and federal agencies, regulatory boards, and insurance companies affect the delivery of health care including reimbursement and duplication of services.

H. Employability Skills: Analyze how employability skills enhance employment opportunities and job satisfaction; demonstrate key employability skills and procedures/training to maintain skills as needed for the job market.

28. Demonstrate proficiency in keyboarding skills and computer applications.
29. Compare various career options in each health care cluster and the required education, certification, licensure and registries.

I. Career Exploration: Research therapeutic careers, education requirements, licensure and scope of practice.

30. Examine various therapeutic careers and their scope of practice.
31. Describe and demonstrate the elements of a professional attitude.
32. Explain various medical legal requirements.
33. Analyze various quality improvement initiatives.
34. Compare and contrast the various health care delivery systems and payment sources.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

J. Legal Awareness: Evaluate legal responsibilities, limitations and implications of actions within the health care delivery system; perform duties according to regulations, policies, laws and rights of clients.

35. Explain legal aspects of client/patient care including confidentiality, consent and negligence.
36. Explain and use the employ the Patient's Bill of Rights in maintaining confidentiality and quality health care.
37. Define "operate within the scope of care" including licensure, accreditation, and legislation affecting professions and facilities.
38. Describe legal requirements in documentation.
39. Describe and give examples of global, ethnic, and cultural issues, negligence, and legal documentation.

K. Ethical Practices: Evaluate accepted ethical practices with respect to cultural, social and ethnic differences within the health care environment.

40. Compare the needs of clients/patients who have cultural, social and ethical differences in regard to the Patient's Bill of Rights.
41. Interpret a Code of Ethics.
42. Describe and demonstrate the process for respecting a client's rights and self-determination.
43. Describe the process of promoting justice and equal treatment of all persons.
44. Describe the importance of client need over other considerations.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

L. Safe and Healthy Work Practices: Analyze the existing and potential hazards to clients, co-workers and self; prevent injury or illness through safe work practices and follow health and safety policies and procedures.

45. Describe various standard precautions and OSHA standards to control the spread of infection including aseptic techniques such as handwashing, personal protective equipment, isolation and personal hygiene.
46. Explain the principles of body mechanics including proper lifting techniques, positioning, moving and transferring.
47. Compare methods for cleaning instruments, equipment and environmental surfaces.
48. Employ emergency procedures and protocols regarding fire and electrical hazards and hazardous materials, using health care guidelines such as OSHA standards.

M. Body Defenses: Demonstrate knowledge of the normal body defenses against disease processes.

49. Identify, describe and compare the body's three lines of defense against disease.
50. Explain the aseptic techniques necessary for disease prevention following OSHA guidelines and Standard Precautions.

N. Individual and Team Responsibilities: Understand the role and responsibilities of individual members as part of the health care team, including the ability to promote the delivery of quality health care; interact effectively and sensitively with all members of the health care team.

51. Describe and demonstrate team membership skills, such as cooperation, leadership and anticipation of the needs of team members.
52. Respect cultural and religious differences among team members.
53. Demonstrate interaction with others consistent with the health care team structure and lines of authority.
54. Explain the process for managing conflict within the workplace.
55. Describe various interdisciplinary roles and responsibilities of the treatment team.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

O. Fundamentals of Wellness: Provide care to patients based on fundamentals of wellness and the prevention of disease processes.

56. Identify available preventive health screenings and examinations.
57. Describe alternative health practices.
58. Describe and demonstrate preventive health practices such as good nutrition and stress management.
59. Explain health risk factors and methods of reduction to patients.
60. Describe methods associated with illness prevention.

P. Client Interaction Skills: Demonstrate client interaction skills by explaining planned procedures and goals to clients/patients.

61. Compare and use verbal and non-verbal communication skills.
62. Describe effective communication skills as well as communication barriers.
63. Explain the characteristics of appropriate telephone techniques.
64. Describe and use various interviewing techniques that reflect an understanding of the client's/patient's age, condition, development, cultural background and interpersonal skills.

Q. Team Communication: Understand how to communicate client information within a team; convey information to appropriate team members in a timely manner.

65. Provide complete client information to team, including formal and informal observations.
66. Observe and report unsafe environmental conditions.
67. Describe unusual occurrences in treatment progress.
68. Document and report information about changes in conditions that might introduce risk to clients or staff.

Medical Careers Education

CONTENT AREA— Medical Careers Education

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

R. Monitoring Patient Status: Monitor client status and plan, implement, and analyze the care provided based on age, physical, and psychosocial needs.

69. Demonstrate the following skills:
 - a. vital signs
 - b. basic CPR principles
 - c. basic first aid
 - d. basic client transfers
 - e. height/weight
 - f. use of standard precautions
 - g. appropriate medical language
70. Compare and contrast how care is provided based on age, physical status, and psycho-social aspects of clients' needs.
71. Analyze clients' specific health education needs.
72. Provide resources and community service information to the community.

S. Principles of Body Mechanics: Understand the principles of body mechanics for positioning, transferring and transporting clients; perform these activities efficiently and without injury to clients or self.

73. Describe and demonstrate the process for positioning the client to ensure comfort.
74. Recognize center of gravity and base of support in order to use proper lifting techniques.
75. Describe and use various types of transport or transfer equipment appropriate for the patient/situation.
76. Inform patients/clients of what to expect during activity.

T. Health Care Skills: Perform classroom laboratory activities and apply knowledge and skills in a health care clinical setting.

77. Read, interpret, verbalize and apply policies and procedures appropriate to the health care setting.
78. Participate in a health care facility orientation prior to clinical experience.
79. Demonstrate the use of pertinent safety precautions and aseptic techniques.
80. Demonstrate the safe and appropriate use of equipment and supplies.

This page is intentionally blank.

Technology Education

This page is intentionally blank.

Technology Education

CONTENT AREA— Automotive Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Customer Relations and Shop Procedures: Explain the basic processes and procedures for maintaining a clean, safe and customer-friendly shop.

1. Interpret repair and work orders including differentiating between parts and labor costs.
 2. Differentiate between flat rate labor and hourly labor.
 3. Describe processes for handling and disposing of hazardous waste adhering to environmental requirements.
 4. Describe a safe working environment for both employees and the shop environment.
 5. Explain the basic processes and procedures for an automotive maintenance schedule.
-

B. Engine Repair: Describe the various processes used to perform engine repair.

6. Describe valve train operation.
 7. Explain engine block assembly and configurations.
 8. Differentiate between gas and diesel engines.
 9. Describe and demonstrate the process for diagnosing and repairing lubrication (organic vs. synthetic) and cooling systems.
 10. Describe and demonstrate the process for performing exhaust inspection and service.
-

C. Electrical/Electronic Systems: Identify and describe the various components of electrical/electronic systems.

11. Describe and demonstrate the process for performing battery diagnosis and service.
 12. Describe starting systems.
 13. Explain charging systems.
 14. Describe lighting systems.
-

D. Engine Performance: Describe the components and functions of the various systems that are related to engine performance.

15. Identify ignition system operation.
16. Describe fuel and air induction systems.
17. Explain emission control systems.
18. Explain the use of a computer scanner to read Diagnostic Trouble Codes (DTC).
19. Describe various alternative fuel technologies.

Technology Education

CONTENT AREA— Automotive Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Suspension and Steering: Identify and describe the function of the components that make up suspension and steering systems.

20. Identify and describe operation of steering system components.
21. Identify and describe operation of suspension system components.
22. Describe principles of wheel alignment.
23. Describe and demonstrate the process for diagnosing and servicing wheels and tires.

F. Brakes: Identify and describe the major components of various types of braking systems.

24. Describe hydraulic systems as they pertain to the service braking system.
25. Describe and demonstrate the process for diagnosing and repairing drum brakes.
26. Describe and demonstrate the process for diagnosing and repairing disc brakes.
27. Describe the components of power assist braking systems.
28. Describe and demonstrate the process for diagnosing and repairing parking brake systems.
29. Explain anti-lock braking systems (ABS) and traction control systems (TCS).

Technology Education

CONTENT AREA— COMPUTER AIDED DRAFTING AND DESIGN

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Materials and Processes: Identify and describe the basic elements used in computer aided drafting and design.

1. Describe physical objects as geometric entities.
2. Describe and demonstrate the process of using mechanical and electronic measuring devices accurately as required by the design intent.
3. Describe and demonstrate the use of graphic communication skills through sketching.
4. Evaluate and select appropriate method of communication for a given problem.
5. Send and access information through a network.
6. Express a design of an object as a 3D model.
7. Export and import images/files in a variety of file formats.
8. Evaluate choice and placement of dimensions, notes and annotations to clearly communicate design intent.
9. Revise a design and update finished drawings appropriately.
10. Identify basic geometric elements (e.g., line, circle, rectangle, sphere, cube)
11. Describe and apply the basic geometric concepts to building 3D models (e.g., tangent, parallel concentric, etc.).

B. Identifying Hardware and Operating Systems: Identify and describe the basic hardware and operating systems used in computer aided drafting and design.

12. Identify and describe various types of hardware and software.
13. Identify and describe the purpose of operating system components.
14. Define and apply computer terminology

C. Using Hardware and Operating Systems: Describe the process of utilizing various hardware and operating systems.

15. View file names of a storage device.
16. Store, copy, move, and retrieve information to/from various drives.
17. Rename and backup files

D. Interpreting and Reading Blueprints: Identify various symbols to interpret and read blueprints.

18. Interpret basic views and dimensions in a working drawing.
19. Identify geometric tolerance symbols.
20. Interpret drawings, pictures, and symbols.

Technology Education

CONTENT AREA— COMPUTER AIDED DRAFTING AND DESIGN

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Creating and Manipulating Mechanical Drawing Information: Describe and demonstrate the process for creating various types of views using a well-organized process.

21. Explain the Cartesian Coordinate System.
22. Describe the process for setting and manipulating drawing elements.
23. Create and manipulate line types, colors and layers/levels.
24. Create and edit basic geometry by inputting coordinates.
25. Insert and manipulate text and fonts.
26. Explain and demonstrate the process for creating orthographic, isometric, section views, and auxiliary view.
27. Insert and manipulate dimensions.
28. Generate a 2-D multiview drawing.
29. Generate a pictorial drawing.
30. Scale and print hard copy of output device.
31. Explain the use and need for scaled drawings.

F. Drawing and Designing Assemblies: Create assemblies and views in 3-D format.

32. Create an assembly in 3-D geometry.
33. Create an exploded view of a 3-D assembly.

G. Using a 3-D Model: Describe and demonstrate the process for converting 2-D drawings to a 3-D format as well as the process for creating construction planes.

34. Create and manipulate construction planes.
35. Generate/modify geometric components on construction planes.
36. Create a 2-D drawing from a 3-D model.
37. Create a 3-D model from a 2-D drawing

Technology Education

CONTENT AREA— Pre-Engineering Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Career Awareness: Identify and describe various careers in the engineering field including educational requirements and ethical expectations.

1. Describe major engineering fields.
 2. Identify functions of an engineer.
 3. Identify educational requirements for an engineer.
 4. Describe ethics related to engineering situations (e.g., environmental, sustainable engineering, medical, and corrupt practices.)
-

B. Design Process: Describe the design process including identify the problem, determining constraints and limitations, analyzing potential solutions as well as the creation of a prototype for testing.

5. Identify principles of a problem.
 6. Describe the process for researching known, relevant information, constraints and limitations.
 7. Analyze and research between alternate solutions.
 8. Develop details of a solution.
 9. Build a prototype from plans.
 10. Test a prototype.
 11. Describe the steps of the design process (e.g, create, evaluate, synthesis, final solution, findings, and present.)
-

C. Safe\Responsible and Ethical Engineering Lab Use: Describe the various types of laboratory equipment and materials used in engineering addressing the importance of quality control and safety.

12. Explain and use pre-engineering laboratory equipment and materials.
 13. Explain quality control.
 14. Measure with precision measurement tools and instruments.
 15. Describe and demonstrate the components of personal and group laboratory safety.
 16. Describe and use safety laboratory equipment.
-

D. Materials: Describe the various materials used in engineering including the process for selecting the appropriate materials based on usage.

17. Describe the properties of steel, concrete, wood and plastic.
18. Explain the process used for select the correct materials for specific functions.
19. Test materials for specific characteristics.

Technology Education

CONTENT AREA— Pre-Engineering Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Teamwork: Explain the characteristics of an effective design team and the process.

20. Contribute to a team project.
 21. Identify characteristics of an effective design team (e.g., leadership, responsibility, respect, rapport and time management).
-

F. Technology: Identify and demonstrate the use of various software programs used in the engineering field.

22. Identify available resources for researching problem solutions.
 23. Use word processing software to develop reports.
 24. Use presentation software to develop oral presentation of findings.
 25. Describe and demonstrate the process for using CAD in a design solution.
 26. Use spreadsheet software to develop tables, graphs and charts and track data.
-

G. Engineering Systems: Identify and describe the various systems that are part of the engineering field including electrical, electronics, hydraulic, pneumatics, mechanical, fluid and thermal systems.

27. Solve problems using vectoring, predict resultant forces.
28. Describe and use Ohm's and Watt's laws.
29. Describe and differentiate among series, parallel, and combination circuits.
30. Explain AC and DC systems.
31. Identify the causes of resistance in a fluid system.
32. Describe components of hydraulic and pneumatic systems.
33. Identify three ways in which heat is transferred.
34. Explain the difference between Celsius and Fahrenheit scales.
35. Describe heat conductors and insulators.
36. Identify the six simple machines and their applications.
37. Use appropriate electrical, mechanical, fluid and thermal units to solve problems.
38. Draw a circuit diagram and lay out the circuit.
39. Identify direction of heat flow given differences in temperature.
40. Describe the use of insulation to minimize heat flow.
41. Explain force in electrical, mechanical, fluid and thermal systems.
42. Describe work in electrical, mechanical, fluid and thermal systems.
43. Explain rate in electrical, mechanical, fluid and thermal systems.
44. Describe resistance in electrical, mechanical, fluid and thermal systems.

Technology Education

CONTENT AREA— Video Production Systems

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Video Production Skills: Understand video production as a communication tool and the equipment and skills required to properly communicate a message.

1. Define terminology associated with the industry and production process.
2. Design a message that is appropriate for a specific audience.
3. Develop scripts and story boards during the pre-production process.
4. Describe how to properly use production equipment (e.g., cameras, tripods, microphones, audio mixers, lighting, editing software concepts, conversion formats and equipment)
5. Identify and describe the steps involved in each “production phase”.
6. Identify and describe the steps involved in the post-production phase.
7. Describe the differences between a studio production and a (field or remote) production.

B. Safety: Describe and apply the fundamental principles that relate to ladder safety, tool safety, fire safety, and equipment safety.

8. Demonstrate safe handling of lighting equipment.
9. Describe and apply the fundamentals of ladder safety.
10. Describe and apply the fundamentals of tool safety.
11. Explain fire safety principles.
12. Identify appropriate equipment safety, use, transport and storage.
13. Describe and apply fundamentals of safety in cable use and dressing.

C. Pre-Production: Describe the process used for concept development and storyboarding as part of the pre-production process while focusing on the importance of communication, deadlines and legal considerations.

14. Identify and define various career paths in digital video production.
15. Properly identify target audience.
16. Describe the process used for concept development and storyboarding.
17. Identify various script elements.
18. Define and describe copyrights, ethics, releases and industry legalities.
19. Identify and describe various communication methods.
20. Explain methods used for planning, scheduling, and establishing deadlines to meet project requirements.
21. Design and construct sets and lighting.

Technology Education

CONTENT AREA— Video Production Systems

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

D. Production: Identify and describe the elements of production to effectively produce a production including various types of music and video formats.

22. Prepare graphics appropriate to project.
23. Describe, plan and apply basic lighting techniques.
24. Describe and apply the elements of producing a studio production.
25. Describe and apply the elements of producing a remote production.
26. Describe and apply the techniques for directing a production (remote or studio).
27. Explain various music formats and applications.
28. Explain various video formats and applications.
29. Identify basic techniques and equipment in sound recording.

E. Photographic Principles: Identify, describe and use the basic functions of a camera and lighting system.

30. Describe the components of basic camera operation.
31. Explain the fundamentals of basic lighting techniques.
32. Describe the elements of composition.

F. Computer Based Technology: Identify and demonstrate the use of various hardware and software programs used in the video production field for a variety of formats.

33. Operate computer and related peripheral devices.
34. Create and manipulate sound and images with application software.
35. Identify and prepare images for appropriate output.
36. Combine media for computer-based presentations.
37. Describe various media options.

G. Alternative Uses of Digital Video Production: Identify and describe various uses of digital video production.

38. Describe various uses of digital video production (e.g., presentations, education, training, personal)

Technology Education

CONTENT AREA— Video Production Systems

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

H. Project Development: Describe the components of successful project development.

39. Describe and implement the process for developing creative treatment and outline.
40. Describe and implement the process for developing and presenting a proposal for a project.
41. Explain the process used for evaluating proposals.
42. Apply promotion skills.

Technology Education

CONTENT AREA— Wood Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

A. Safety: Describe and demonstrate the procedures related to workplace and job-site safety including personal protective equipment, machine safety and material handling practices.

1. Demonstrate safe material handling practices.
2. Describe workplace and job-site safety procedures.
3. Identify and describe various types of personal protective equipment (PPE).
4. Describe safety practices for specific machines.

B. Machines and Tools: Identify and describe the function of various types of layout, hand and power tools as well as specialty machinery used in the Wood Technology field.

5. Identify, use and maintain measuring layout, and marking tools.
6. Identify proper use and function of portable power cutting tools.
7. Identify proper use and function of fastening tools.
8. Identify proper use and function of portable power tools.
9. Identify proper use and function of hand tools.
10. Identify proper use and function of stationary saws.
11. Identify the proper use and function specialty machinery (e.g., drill presses, jointers, surface planers, table saws, power miter saws, bandsaws, scroll saws, and stationary sanders)

C. Design and Layout: Describe the process for interpreting and preparing technical drawings and rough drawings and sketches.

12. Describe and interpret technical drawings.
13. Describe and prepare rough drawings and sketches.
14. Explain and prepare a cut list or bill of material.

D. Blueprint Reading and Estimation: Demonstrate the process for interpreting blueprints to extrapolate information from a set of plans using appropriate mathematical functions.

15. Explain and use fractional dimensions.
16. Extrapolate information from a set of plans.
17. Estimate materials quantities in both board feet and linear feet.

Technology Education

CONTENT AREA— Wood Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

E. Milling: Identify and describe the function of various types of lathes, sanders, surfacers and molders.

18. Explain correct use of surfacers.
19. Explain use of molders.
20. Identify functions of wood lathes.
21. Identify use and function of sanders.

F. Jointery: Identify various types of joints and describe the process for preparation and assembly.

22. Identify various types of joints.
23. Prepare rough stock.
24. Assemble joints.

G. Assembly: Identify and describe the purpose of various types of fasteners, adhesives and clamping devices.

25. Identify, describe purpose of and use woodworking fasteners.
26. Identify, describe purpose of and use woodworking adhesives.
27. Identify, describe purpose of and use clamping devices.

H. Finishing: Describe various types of available finishes and safety precautions used during the application process.

28. Identify and apply various finishes.
29. Explain safe usage and storage of chemicals.

I. Abrasives: Describe the various types of abrasive materials used in wood technology.

30. Describe abrasive grit systems.
31. Differentiate among various abrasive materials.

Technology Education

CONTENT AREA— Wood Technology

Content Measure – Thirty-five percent of concentrators assessed will achieve 65 percent proficiency.

PERFORMANCE STANDARDS AND COMPETENCIES

J. Materials: Describe characteristics and appropriate applications for softwoods, hardwoods and plywoods.

32. Identify characteristics and applications of softwoods.
33. Identify characteristics and applications of hardwoods.
34. Identify characteristics and applications of plywood.